

REMARKS

In response to the Office Action mailed March 3, 2011, Applicant respectfully requests the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. By this paper, Applicant will have canceled Claim 3 and added Claims 20-25. Accordingly, Claims 1-2, 4-5, 7-10, 12, and 14-25 are currently pending in the present Application.

Prior Art Rejections

In the Office Action, Claims 1-2, 4-5, 7-10, 12, 14-17 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,744,754 issued to Ross (hereinafter “Ross”) in view of U.S. Patent No. 4,723,913 issued to Bergman (hereinafter “Bergman”) and U.S. Patent No. 6,419,491 issued to Ricci, et al. (hereinafter “Ricci”). Applicant respectfully traverses the rejection of Claims 1-2, 4-5, 7-10, 12, 14-17 and 19 and request that this rejection be withdrawn and that these claims be indicated as allowable. Applicant respectfully submits that the modification of Ross is improper because the grooves in Ross are intended for use against hard bone whereas the grooves in Bergman are explicitly taught for use against soft tissue. Given the significant differences between bone and soft tissue, a person of skill would not be motivated to change the dimensions of the grooves in Ross based on the teachings of Bergman.

The Office Action argues that it would have been obvious to combine Ross, Bergman, and Ricci to create the implants and methods recited in the claims of the present Application. Nevertheless, the Office Action must resort to a combination of multiple, unrelated aspects of these references to create a combination allegedly sufficient to form a basis for rejection. The complexity, unrelatedness, and specificity of this three-way rejection undermines the likelihood that a person of skill would have any reason to modify Ross as proposed. Although Applicants recognize that reliance on “a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention” (M.P.E.P. 707.07(f)), the combination proposed by the Office Action combines divergent, unrelated aspects of the references in a manner that would be unreasonable to a personal skill in the art, as discussed below. To the

contrary, the teachings of these references would motivate a person of skill not to adapt the teachings of these references to Ross as proposed.

The Office Action initially applies Ross, which teaches a press-fit dental implant having a plurality of discrete circumferential grooves 34, 48 formed between ribs 36, 50 on a top part of the implant. Although Ross discloses that bone growth will occur in the grooves 34, 48 (*see* Ross, col. 6, lines 41-48), Ross is silent on the actual dimension of the grooves 34, 48. Ross does not teach that the dimension of the grooves of 34, 48 would affect, much less “optimize the osseointegration of the implant to the bone tissue,” as suggested by the Office Action. *See* Office Action, page 3. Nevertheless, the Office Action alleges that a person of skill would find it obvious to modify the grooves of Ross to the specific dimension taught in Bergman in order to optimize osseointegration. However, the grooves 14 in Bergman are intended to be placed against the soft tissue—not bone tissue as in Ross—to prevent soft tissue migration downward along the implant into the bone. In particular, Bergman expressly indicates that its grooves 14 are placed against soft tissue to prevent fibroblast and epithelial migration down the implant. *See* Bergman, col. 1, lines 12-15 and col. 2, lines 51-53. This purpose is very different from the osseointegration taught in Ross. Accordingly, a person of skill understands that because soft tissue and bone tissue have different characteristics, grooves dimensions optimized for soft tissue would not necessarily be effective or desirable for bone tissue, as proposed by the Office Action.

Further, Bergman provides no teaching on possible effects on osteoblasts, bone growth, or how to optimize osseointegration in the grooves. Hence, the Office Action’s statement that Bergman’s circumferential grooves are for bone growth and osseointegration is incorrect and is not properly supported. *See* Office Action, page 3. Furthermore, Ross exclusively teaches that the grooves of its implant are used for osseointegration. Thus, a person of skill has no reason and would not refer to the soft tissue grooves of Bergman to modify the bone tissue grooves of Ross. Therefore, contrary to the proposed modification in the Office Action, a person of skill has no reason to modify the grooves of Ross to have the depth and width taught by Bergman.

In contrast, Claim 1 recites, *inter alia*, an implant having “at least one groove which extends all around an outer surface of the upper portion to form a closed loop . . . having a depth of between about 50 - 100 μm and having a width of between about 70 - 160 μm .” Further, Claim 15 recites, *inter alia*, a method of placing an implant comprising placing an implant

having "at least one groove which extends in a closed track around a periphery of the implant . . . having a depth of between about 50 - 100 μ m and having a width of between about 70 - 160 μ m."

Additionally, Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Bergman and Ricci, according to Claim 1 and 15, and further in view of U.S. Publication No. 2004/0142304 issued to Cottrell. As noted above, although for reasons unrelated to the present rejection, Applicant has deleted Claim 3. However, Applicant respectfully submits that Claim 18 should be allowable based on its own merit and for at least the reason that Claim 18 depends from an allowable independent base claim.

Therefore, Applicant respectfully submits that Claims 1, 15, and 18 are allowable over the art of record and respectfully request that the Examiner withdraw the rejection of these claims, as well as that of Claims 1-2, 4-5, 7-10, 12, 14-17, and 19.

New Claims

Applicant has added new Claims 20-25. Claims 20-22 depend upon Claim 1 and for at least this reason are in condition for allowance. Further, Claims 23-25 depend upon Claim 15 and for at least this reason are in condition for allowance. No new matter has been added through these claims.

New Claims 20 and 23 are generally directed to an implant and method in which an implant part is situated above the (grooved) upper portion. Therefore, in such embodiments, the groove would not be positioned at the uppermost (most coronal) end of the implant. However, the grooves 34 in Ross and the grooves 14 in Bergman are immediately below the top of the implant's body (see Fig. 2 in Ross, and claim 13 and FIGS. 1-5 in Bergman). A person skilled in the art would not be encouraged to provide an implant part above the grooves 14 in Bergman (as required by claim 20) for at least the reason that such a part would extend above the gum/soft tissue, alternatively not make the grooves 14 align with the gum/soft tissue, when the implant is installed.

Further, Ross and Bergman appear to be a press-fit implants, and fail to disclose an outer thread by means of which the implant can be screwed into a hole formed in the jaw bone, as required by new Claim 22 and 25.

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No Disclaimers or Disavowals

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present Application.

CONCLUSION

Applicant respectfully submits that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicant respectfully requests that the Examiner indicate that Claims 1-2, 4-5, 7-10, 12, and 14-25 are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicant respectfully submits that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments are made only to expedite prosecution of the present Application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicant also has not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted

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above, and Applicant reserves the right to later contest whether a proper reason exists to combine these references and to submit indicia of non-obviousness.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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